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ABSTRACT

Wound healing has been described throughout the history of Ayurveda. Our ancient Acharyas knew that proper wound debridement is the fundamental step in wound healing process. The Dushta vrana becomes even more complicated and difficult to manage if body’s normal biological response to fight wounds becomes impaired. Ancient Acharyas propounded, practiced and described a number of drugs and procedures for vrana shodhana, vrana ropan, kusthghan, jantughana, vranapachan, vedanosthapan, putihar, raktaprasadan, raktashodhan. Jatyadi ghrit is described by Acharya Sharangdhara in Sarangdhara Samhita, madhyam kahnda9/58-60 for marmashrita vrana (ulcer present over the vital parts), kledi vrana (wound suppuration), gambhir vrana (deep seated wound), non-healing ulcers, boils, insect bites etc. This case study shows enthusiastic results of jatyadi ghrit on chronic ulcer in a 98 years old lady.

KEYWORDS

Dushtavrana, Shodhana, Ropan, Kusthghan
INTRODUCTION

Features of pure *vrana* according to *Acharya Shusruta* are that resembling to the upper surface of the tongue, soft, moist, smooth, painless, even and not exuding fluids\(^1\). Wounds in persons suffering from leprosy, poison, consumption, diabetic and in those who are having wounds already, heal with difficulty\(^2\). Chronic wound are defined as wounds that have failed to proceed satisfactory anatomic and functional integrity or that have proceeded through the repair process without producing an adequate anatomic and functional results\(^3\).

CASE STUDY

Name XXX
Age 98 yrs
Sex Female
Religion Hindu
Social status Middle class
Address Harawala, Dehradun
H/O present illness Patient came to the hospital with the complaint of wound over the dorsum of the left foot since six months. The wound caused due to accidental penetration of a wooden piece. Without proper care and management, the wound did not heal. Therefore, for alternative care patient visited Shalya Dept., UAU, Main campus, Harawala.

Past history No H/O DM, HTN, Thyroid, TB etc.
Personal history Widow

General examination

CNS Well
CVS Both S1, S2
Respiratory clear with no added sound
R/R/W CTA B, no
Abdomen NAD
Respiration rate 18/min
BP 112/72 mm/hg
P/R 70/ min, regular
Temperature Afebrile

Local examination

1. Inspection
Shape Oval with asymmetrical outline, 6*3.5 cm
Size Single
Number Irregular
Position Dorum
aspect of the left foot
Edge Inflamed and oedematous, around 5 mm depth
Floor Pale and
smooth granulation tissue
Discharge Purulent
Discharge with foul smell

2. Palpation
Tenderness Slightly tender
Edge and margin Induration
Base Slight
induration present
Depth 5 mm
Surrounding area Oedematous
and tendered
Dosalis pedis Palpable B/L
Lymphadenopathy Absent
Vascular insufficiency  Absent
Nerve lesion  Absent
Blood investigation  Normal

APPLICATION OF JATYADI GHRIT OVER CHRONIC ULCER

First day, after proper wound debridement with Hydrogen Peroxide solution and 0.9% normal saline, the chronic ulcer was anointed with *jatyadi ghrit* and covered with sterile gauze piece with loose bandaging. Every day the pale and smooth granulation tissue was removed thoroughly with mosquito forceps and loose bandaging was done. *Aarogyavardhini vati, Haridrakhand* and *Cap. Amalaki* were given orally for one month till the wound healed. The patient was advised to have mutton soup and half egg on alternate days. One and half months later, the wound was reduced to a great extent with speedy healing of the six months old ulcer.

DISCUSSION

To understand the mode of action of *jatyadi ghrit* scientifically, it is imperative to know about their own inherent constituents (*dravya rasa, guna, veerya, vipaka* and *prabhav*), *dosh-karma*, properties and main actions.\(^4,5,6,7\)

**Probable mode of action of jatyadi ghrit**

1. **Wound debridement**
   By *Vrana shodhan* properties of *Jati, Nimb, Patola, Daruharidra*.

2. **Wound healing**
   By *Vrana ropana* properties of *Jati, Nimb, Patola, Daruharidra, Mangistha*.
   Anti ulcer properties *Nimb, Madhuyasti, Haridra, Darharidra, Karanj, Sariva, Kutaki*.

3. **Pain alleviation**
   By *Vedana sthapana* properties of *Patola, Daruharidra*.
   Analgesic actions of *Haridra, Daruharidra, Blue vitriol*.

4. **Hemostasis**
   *Rakta-stambhaka* properties of *Madhuyasti, Haridra, Daruharidra*.
   Hemostatic actions of *Karanj*.

5. **Effect on burning sensation**
   *Daha prashman* by *Nimb, Sariva*.

6. **Effect on discharge**
   By *Jantughana* properties of *Nimb, Haridra, Kutaki*.
   *Putihar* properties of *Nimb*.
Anti-microbial action of Jati, Nimb, Madhuyasti, Haridra, Daruharidra, Karanj, Kutaki, Sariva, Blue vitriol.

7. **Effect on itching**
Kandughan action of Jati, Nimb, Madhuyasti.

<p>| Table 1 Jatyadi ghrit ingredients with their properties |
|----------------|----------------|----------|-------|-----|--------|----------------|</p>
<table>
<thead>
<tr>
<th>S.No.</th>
<th>Ingredients</th>
<th>Botanical name</th>
<th>Rasa</th>
<th>Guna</th>
<th>Veerya</th>
<th>Vipaka</th>
<th>Doshkarma</th>
<th>Main action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Jaati</td>
<td>Jasminum officinale</td>
<td>Tikta, Kashaya</td>
<td>Laghu, snigdha, Mridu</td>
<td>Usna</td>
<td>Katu</td>
<td>Tridosh-har</td>
<td>Vranashodhan, Vranaropana, Kusthghana</td>
</tr>
<tr>
<td>2.</td>
<td>Nimb</td>
<td>Azadiracta indica</td>
<td>Tikta, Kashaya</td>
<td>Laghu</td>
<td>Sheeta</td>
<td>Katu</td>
<td>Kapha-pitta shamak</td>
<td>Kandughana</td>
</tr>
<tr>
<td>3.</td>
<td>Haridra</td>
<td>Curcuma longa</td>
<td>Tikta, katu</td>
<td>Raksha, laghu</td>
<td>Ushna</td>
<td>Katu</td>
<td>Tridoshshama k</td>
<td>Kusthghana</td>
</tr>
<tr>
<td>4.</td>
<td>Daruhabridra</td>
<td>Berberis aristata</td>
<td>Tikta, kashaya</td>
<td>Laghu, raksha</td>
<td>Usna</td>
<td>Katu</td>
<td>Kapha-pitta shamak</td>
<td>Vranashodhan, Vranaropana, Sothahar, Vadanaasthapan</td>
</tr>
<tr>
<td>5.</td>
<td>Patol</td>
<td>Trichiosanthes dioca</td>
<td>Tikta</td>
<td>Laghu, raksha</td>
<td>Ushna</td>
<td>Katu</td>
<td>Tridoshshama k</td>
<td>Raktashodhak, Shothahar, Jwaraghana</td>
</tr>
<tr>
<td>6.</td>
<td>Sariva</td>
<td>Hemidesmus indicus</td>
<td>Madhur, tikta</td>
<td>Guru, snigdha</td>
<td>Sheeta</td>
<td>Madhura</td>
<td>Tridoshshama k</td>
<td>Raktashodhaka, Shoth-har</td>
</tr>
<tr>
<td>7.</td>
<td>Manjistha</td>
<td>Rubia cordifolia</td>
<td>Tikta, kashaya, madhar</td>
<td>Guru, raksha</td>
<td>Usna</td>
<td>Katu</td>
<td>Kapha-pitta shamak</td>
<td>Vranaropan, raktashodhak, sothahar</td>
</tr>
<tr>
<td>8.</td>
<td>Yastimadhu</td>
<td>Glycyrrhiza glabra</td>
<td>Madhur</td>
<td>Guru, snigdha</td>
<td>Sheet</td>
<td>Madhur</td>
<td>Vata-pitta shamak</td>
<td>Raka stambhaka, kandughana</td>
</tr>
<tr>
<td>9.</td>
<td>Katuki</td>
<td>Picrorhiza kurroa</td>
<td>Tikta</td>
<td>Raksha, laghu</td>
<td>Sheeta</td>
<td>Katu</td>
<td>Kapha-pitta shamak</td>
<td>Jantughana, raktashodhak, sothahar, Kusthagha</td>
</tr>
<tr>
<td>10.</td>
<td>Karanja</td>
<td>Pongamia pinnata</td>
<td>Tikta, kashaya, katu</td>
<td>Laghu, tikshan a</td>
<td>Usna</td>
<td>Katu</td>
<td>Kapha-vata shamak</td>
<td>Raktashodhak, raktaprashadak, jatughna, Kandughana</td>
</tr>
<tr>
<td>11.</td>
<td>Usheera</td>
<td>Vetivera zizanoides</td>
<td>Tikta, madhur</td>
<td>Raksha, laghu</td>
<td>Sheeta</td>
<td>Katu</td>
<td>Pittashamak</td>
<td>Raktastambak, Swedahar, Gandharah</td>
</tr>
<tr>
<td>12.</td>
<td>Blue vitriol</td>
<td>Copper sulphate</td>
<td>Katu, kashaya, madhar</td>
<td>Laghu</td>
<td>Usna</td>
<td>Katu</td>
<td>Kapha-pitta shamak</td>
<td>Vranaropan</td>
</tr>
<tr>
<td>13.</td>
<td>Cow ghrit</td>
<td>Ghee</td>
<td>Madhur</td>
<td>Sheet</td>
<td>Madhur</td>
<td></td>
<td>Vata-pitta nashak</td>
<td></td>
</tr>
</tbody>
</table>

8. **Blood purification**
Rakta- prashadak properties of Nimb, Jati, Haridra, Karanj.

Rakta- shodhak properties of Mangistha, Karanj, Kutaki, Sariva.
Vishghana action of Sariva.
Table 2 Plant properties according to ancient literatures

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Main action</th>
<th>Plant’s name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Vrana shodhan</td>
<td>Jati, Nimb, Patola, Daruharidra</td>
</tr>
<tr>
<td>2</td>
<td>Vrana ropana</td>
<td>Jati, Nimb, Patola, Daruharidra, Mangistha</td>
</tr>
<tr>
<td>3</td>
<td>Kustaghana</td>
<td>Jati, Kushta, Sariva, Mangistha</td>
</tr>
<tr>
<td>4</td>
<td>Kandughana</td>
<td>Jati, Nimb, Madhuyasti</td>
</tr>
<tr>
<td>5</td>
<td>Jantughana</td>
<td>Nimb, Haridra, Katuki</td>
</tr>
<tr>
<td>6</td>
<td>Vrana pachan</td>
<td>Nimbpatra, Haridra</td>
</tr>
<tr>
<td>7</td>
<td>Vedana sthapana</td>
<td>Patola, Kushta, Daruharidra</td>
</tr>
<tr>
<td>8</td>
<td>Putihar</td>
<td>Nimb, Kushta</td>
</tr>
<tr>
<td>9</td>
<td>Daha prashman</td>
<td>Nimb, Sariva</td>
</tr>
<tr>
<td>10</td>
<td>Rakta-sthabhaka</td>
<td>Madhuyasti, Haridra, Daruharidra,</td>
</tr>
<tr>
<td>11</td>
<td>Rakta-prashadak</td>
<td>Nimb, Jati, Haridra, Karanji</td>
</tr>
<tr>
<td>12</td>
<td>Rakta-shodhak</td>
<td>Patola, Mangistha, Karanji, Katuki, Sariva</td>
</tr>
<tr>
<td>13</td>
<td>Vishaghana</td>
<td>Sariva</td>
</tr>
</tbody>
</table>

Table 3 Showing plant’s main actions

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Plant name</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Anti-inflammatory</td>
<td>Jati, Nimb, Patola, Madhuyasti, Haridra, Daruharidra, Manjistha, Karanji, Katuki, Sariva</td>
</tr>
<tr>
<td>2</td>
<td>Antioxidant</td>
<td>Patola, Madhuyasti, Kutaki, Haridra, Sariva, Blue vitriol</td>
</tr>
<tr>
<td>3</td>
<td>Analgesic</td>
<td>Haridra, Daruharidra, Blue vitriol</td>
</tr>
<tr>
<td>4</td>
<td>Anti-ulcer</td>
<td>Nimb, Madhuyasti, Haridra, Daruharidra, Karanji, Sariva, Kutaki</td>
</tr>
<tr>
<td>5</td>
<td>Anti-microbial</td>
<td>Jati, Nimb, Madhuyasti, Haridra, Daruharidra, Karanji, Kutaki, Sariva, Blue vitriol</td>
</tr>
<tr>
<td>6</td>
<td>Immuno-modulator</td>
<td>Haridra, Daruharidra, Kushta, Nimb</td>
</tr>
<tr>
<td>7</td>
<td>Haemostatic</td>
<td>Karanji</td>
</tr>
</tbody>
</table>

Probable mode of action of jatyadi ghrit

Wound debridement
By Vrana shodhan properties of Jati, Nimb, Patola, Daruharidra.

Effect on burning sensation
Haemostatic actions of Karanji

Wound healing
By Vrana ropana properties of Jati, Nimb, Patola, Daruharidra, Mangistha.

Effect on discharge
By Jantughana properties of Nimb, Haridra, Kutaki.

Anti ulcer properties of Nimb, Madhuyasti, Haridra, Darharidra, Karanji, Sariva, Kutaki

Pain alleviation
By Vedana sthapana properties of Patola, Daruharidra.

Effect on itching
Kandughan action of Jati, Nimb, Madhuyasti.

Analgesic actions of Haridra, Daruharidra, Blue vitriol

Hemostasis
Blood purification
Rakta-prashadak properties of Nimb, Jati, Haridra, Karanj.

Rakta-shodhak properties of Mangistha, Karanj, Kutaki, Sariva.

Vishghana action of Sariva.

**CONCLUSION**

The contents of *jatyadi ghrít* have anti-inflammatory, antioxidant, analgesic, anti-ulcer, anti-microbial, immune-modulator and haemostatic properties, it helps in smooth healing of the *dust vrana*. The natural ingredients present in the *jatyadi ghrít* initiate regeneration of the destroyed tissue, removal of damaged structures and thus speed up the healing of the ulcer to restore the normalcy. This study will definitely give a hope to new researchers to work on more and more herbal formulations with their miraculous results.
REFERENCES

1. Prof. K.R.Srikantha Murthy, Susruta samhita, Chikitisa sthana, Chaukhamba orientalia, Varanasi, 2016, 1/7; p-6.